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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,014	11/17/2003	Masataka Shinoda	245426US6	9739
22850 7590 06/14/2007 OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER NGUYEN, LINH THI	
			ART UNIT	PAPER NUMBER
			2627	
			NOTIFICATION DATE	DELIVERY MODE
			06/14/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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## Office Action Summary

Application No.

10/713,014.

Applicant(s)

SHINODA, MASATAKA

Examiner

Linh T. Nguyen

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.138(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1, 3, 4, 6-8, and 10-14 is/are pending in the application.
- 4a) Of the above claim(s) 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 4, 6-8 and 10-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/26/07 has been entered.

### ***Election/Restrictions***

Newly submitted claim 14 is directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: The application contains claims directed to the following patentable distinct species of claimed invention:

- a. Species I-Fig. 8 and 9
- b. Species II-Fig. 10

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 14 withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

### ***Drawings***

Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 4, 6-8, and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeshi (JP Publication number 11273126) in view of Nuss (US Patent number 5789750), and further in view of Corle et al (US Patent number 5125750).

In regards to claim 1, Takeshi discloses an optical lens comprising: an optical material comprising a SiC (Paragraph [0007], lines 5-6). Takeshi does not but Nuss discloses an optical lens made of silicon with a cubic crystal structure (Column 5, lines 49-54). However, Takeshi and Nuss do not disclose an optical lens comprising a

conical objective surface; and a convex spherical surface formed opposite said conical objective surface.

In the same field of endeavor, Corle et al discloses an optical lens comprising a conical objective surface; and a convex spherical surface formed opposite said conical objective surface (Fig. 5A-B). At the time of the invention it would have been obvious to a person of ordinary skill in the art to produce lenses from SiC of Takeshi with a structure of cubic crystal as taught by Nuss with a conical shape structure suggested by Corle et al. The motivation for doing so would have been to provide silicon lens with especially preferred cubic crystal structure for ease of cutting and further decrease the spot size to improve the resolution of optical storage media (Column 2, lines 4-7).

In regards to claim 3, Takeshi discloses a condenser lens comprising a first optical lens (Fig. 1 element 16) and a second optical lens (Fig. 1, element 15) arranged in this order from an objective surface so that the optical axes of said first and second optical lenses are in line with each other (Fig. 1, elements 15 and 16 are in line); wherein at least said first optical lens is formed from an SiC (Paragraph [0007], lines 5-6). Takeshi does not but Nuss discloses an optical lens made of silicon with a cubic crystal structure (Column 5, lines 49-54). Takeshi and Nuss do not but Corle discloses wherein said first optical lens further comprises a conical objective surface and a convex spherical surface formed opposite said conical objective surface (Fig. 5A-B). The motivation is the same as claim 1 above.

In regards to claim 4, Takeshi discloses an optical pickup comprising a light source and a condenser lens for converging light emitted from said light source to form

a beam spot (Paragraph [0008], lines 3-5), said condenser lens comprising a first optical lens (Fig. 1, element 16) and a second optical lens (Fig. 1, element 15) arranged in this order from an objective surface so that the optical axes of said first and second optical lenses are in line with each other (Fig. 1); wherein said first optical lens is formed from an SiC (Paragraph [0007], lines 5-6). Takeshi does not but Nuss discloses an optical lens made of silicon with a cubic crystal structure (Column 5, lines 49-54). The motivation is the same as claim 1 above.

In regards to claims 6 and 10, Takeshi discloses an optical pickup and recording/reproducing apparatus, wherein the wavelength of said light emitted from said light source is longer than 564 nm (Paragraph [0008], lines 1-3).

In regards to claims 7 and 11, Takeshi discloses an optical pickup and recording/reproducing apparatus, wherein said light source comprises a semiconductor laser (Paragraph [0016], lines 2-7).

In regards to claim 8, Takeshi discloses an optical recording/reproducing apparatus (Fig. 1) comprising an optical pickup (Fig. 1, element 12) including a light source (Fig. 1, element 10) and a condenser lens for converging light emitted from said light source to form a beam spot (Paragraph [0008], lines 3-5), said condenser lens including a first optical lens (Fig. 1, element 16) and a second optical lens (Fig. 1, element 15) arranged in this order from an objective surface so that the optical axes of said first and second optical lenses are in line with each other (Fig. 1); and control drive means for controllably driving said condenser lens in a focusing direction and/or a tracking direction of an optical recording medium (Fig. 1, element 17); wherein said first

optical lens is formed from an SiC (Paragraph [0007], lines 5-6). Takeshi does not but Nuss discloses an optical lens made of silicon with a cubic crystal structure (Column 5, lines 49-54). Takeshi and Nuss do not but Corle discloses wherein said first optical lens further comprises a conical objective surface and a convex spherical surface formed opposite said conical objective surface (Fig. 5A-B). The motivation is the same as claim 1 above.

In regards to claim 12, Takeshi discloses an optical recording/reproducing apparatus, wherein the light beam of said light emitted from said light source has an optical axis substantially parallel to the principal surface of said optical recording medium (Fig. 1, element 1 optical disk is parallel with element 10, light source).

In regards to claim 13, Takeshi discloses an optical recording/reproducing apparatus, further comprising means for mounting a plurality of optical recording media spaced from each other; the spacing between adjacent ones of said optical recording media being larger than the diameter of the light beam of said light emitted from said light source (Paragraph [0012]).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linh T. Nguyen whose telephone number is 571-272-5513. The examiner can normally be reached on 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571-272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LN  
June 9, 2007

WAYNE YOUNG  
SUPERVISORY PATENT EXAMINER

